

NETWORKS

FAQ

Q What does a crossover cable do, and do you think I need one?

A A network cable contains a set of wires. Some are for transmitting data and some are for receiving it. When you connect to a network switch using a normal cable, the switch automatically takes the data from the transmitting wires of one PC and sends them to the receiving wires on another PC.

A crossover cable is wired so the transmitting wires at one end are wired to the receiving connectors at the other. This means you can connect two PCs together without having to use a switch, which can be useful if you need to share files.

A crossover cable can also be used to connect together two switches, which comes in handy if you need to increase your wired network capacity.

David Ludlow
Reviews Editor



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US ROBOTICS Wireless ADSL2+ Starter Kit

★★★★

£64 inc VAT

US Robotics' Wireless ADSL2+ Starter Kit provides everything you need to share an ADSL connection wirelessly. The pack contains a wireless router and a USB 802.11g wireless adaptor, both with a clean white finish.

As this is a slightly cheaper product than other routers we've reviewed, you don't get quite so many features. For a start, the router has just a single Ethernet port for connecting a wired PC, not the usual four-port switch. This shouldn't cause problems for most people, and you can always connect a separate switch using a crossover Ethernet cable (see FAQ left). You can't upgrade the antenna if you're having trouble with wireless performance, though, because this is permanently attached.

The router comes with wireless turned off, so you have to use the wired connection to configure your settings. While this seems good for security, as no-one can get on your network before you've configured it, it doesn't help. The wizard that took us through configuration stopped short of making us turn on encryption.

This means that you have to remember to do it manually, and it's a little tricky to do. Clicking on the WPA link in the management system lets you configure your encryption settings and pass phrase, but it doesn't actually turn it on. Instead, you have to click on the Security link and choose WPA.

The router has all the advanced options that you'd expect, including port forwarding and a firewall. The web interface to change these



options isn't as sleek or as easy to use as on US Robotics' high-end MAXg products.

Performance isn't quite as good as we'd hoped, with our Centrino notebook performing worse than with our test router. We were hoping for better things from the USB adaptor, but we got slightly worse scores than with Centrino. This is likely to be because the router and adaptor don't have a turbo mode.

We also ran into some problems getting the adaptor installed on our test notebook. Initially, the installation caused the computer to blue-screen crash

and, after a reboot, it refused to start Windows. After starting in Safe Mode and restoring the PC to a much earlier date, we finally got the software installed correctly. We assume that the adaptor's software was clashing with other software on the notebook.

For wirelessly sharing a broadband connection, the ADSL2+ Starter Kit is excellent value. If you want to stream media and share files, though, we'd spend a bit more money and buy the MAXg router (see 'Also consider...' below).

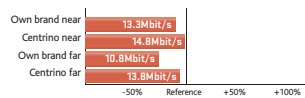
David Ludlow

SUMMARY

- ✓ Good value
- ✗ No prompts to turn on security
- ✗ Performance less than we hoped

802.11G WIRELESS ROUTER 54Mbit/s, Ethernet port, ADSL2+ modem, 802.11g USB adaptor PART CODE USR015473
SUPPLIER www.nickknows.com
DETAILS www.usr.com

PERFORMANCE (see page 60)



Also consider...

BUFFALO AirStation G54 High Power

★★★★★

£44 inc VAT

BEST BUY Buffalo's High Power router uses brute force signal strength to give the fastest and longest wireless transmission we've seen. The router provides a speed boost to all devices on the network. The management interface is one of the easiest we've used, and the router is very well priced. This is an excellent choice.



802.11G WIRELESS ROUTER 125Mbit/s turbo mode, four-port Ethernet switch, AOSS PART CODE WHR-HP-G54
SUPPLIER <http://uk.insight.com> DETAILS www.inmac.co.uk

✓ Improves whole network performance ✗ No security prompt
FULL REVIEW Dec 2005

US ROBOTICS Wireless MAXg ADSL2+ Gateway

★★★★★

£79 inc VAT

BEST BUY US Robotics' Wireless MAXg ADSL2+ Gateway is all you need to share an ADSL broadband connection. The built-in modem supports the new ADSL2+ standard, so it will work with connections up to 24Mbit/s. It achieved a throughput of 24.58Mbit/s at 10m using a MAXg network adaptor. It also works well with standard WiFi adaptors, achieving a throughput of 17.94Mbit/s using a Centrino notebook.

MAXg technology is designed to improve speed and throughput. It works within the 802.11g specification, unlike MIMO routers, so it won't be obsolete soon.



802.11G WIRELESS ROUTER 125Mbit/s turbo mode, ADSL2+ modem, four Ethernet ports PART CODE USR019108
SUPPLIER www.nickknows.com DETAILS www.usrobotics.com ✓ Fast wireless ✗ Range not as good as MIMO routers
FULL REVIEW Apr 2006

US ROBOTICS USR809600

★★★★★

£23 inc VAT



Skype might be brilliant for making phone calls over the internet, but it just doesn't feel right if you have to use a PC headset. US Robotics' USR809600 is a USB phone for use with the service. It feels comfortable and it's just like holding a decent mobile handset.

Considering the low price, we were surprised it has an LCD screen. Other Skype phones we've reviewed, such as Linksys' Cordless Internet Telephony Kit (*What's New, Shopper* May 2006), use this screen to display Skype contacts. The USR809600 doesn't have this feature. Instead, the screen displays the current date and time in standby mode. The phone is tethered to the PC by a metre-long cable, so this isn't a problem as you can see your contacts onscreen. The phone's cursor keys can be used to navigate through Skype contacts, which saves time messing around with the keyboard and mouse.

If you use SkypeOut to call traditional landlines, the LCD screen works exactly as on a cordless telephone, displaying the numbers as you type them, so you don't have to reach for your keyboard or mouse when you want to make a call. However, Skype requires you to dial full international numbers when you make SkypeOut calls, so it knows how to route them, and the USR809600 doesn't display the leading '+' before the country code. This means you can't tell if you've misdialled a number until you hit the call button, which meant we had to redial a lot of numbers. You can simplify things by adding all your phone numbers as contacts and giving them quick-dial numbers that you just key into the handset.

There are a couple of other annoyances. First, pressing the hang-up button minimises the Skype window but pressing the call button doesn't just bring Skype to the foreground, it also dials the currently selected contact so prepare to talk to a few people by mistake. Second, the USR809600 becomes the default sound device on your PC. In fairness, this is a problem with all VoIP phones we've reviewed. US Robotics' manual at least addresses this point and tells you how to correct it.

Sound quality from the phone was excellent and distortions in quality were down to the speed of our internet connection. Despite the little problems that we found, the USR809600 is excellent value and great for any traveller.

David Ludlow

SUMMARY

- ✓ Cheap
- ✓ Integrates well with Skype
- ✗ Automatically dials selected contact

USB2 VOIP HANDSET Integrates with Skype
PART CODE USR809600
SUPPLIER www.broadbandbuyer.co.uk
DETAILS www.usr.com

HAWKING HWU54DM

★★★

£35 inc VAT



We cover a lot of wireless products designed to increase range and performance for one reason: wireless networks rarely work as well as they should. The HWU54DM is the latest product to offer increased range and throughput.

It looks impressive from the outside. The fat antenna is loaded with LEDs, which give you a reading on the signal strength from the wireless network to which you're connected. As you can rotate the adaptor 360° and adjust its angle by 180°, it's possible to get the best-quality signal without having to move your PC or notebook.

The HWU54DM contains a 5dBi antenna, which provides a boost from most adaptors' 2dBi antennas. It comes with a USB dock, so you can use it with a desktop PC without having to reach round the back to make adjustments.

The bundled software installed easily on our PC and gave us an option of a Wifii [sic] mode for compatibility or Performance mode, for maximum throughput. We chose Performance mode and finished the install. But we ran into problems when trying to connect to our default test network. We could physically connect, but the HWU54DM refused to get an IP address automatically when encryption was turned on. This was strange, as we were trying to connect to a Hawking wireless router. Even stranger, we could connect to a US Robotics wireless router with encryption and get an IP address.

We reset the router to default settings, turned encryption off and managed to connect. But turning encryption back on caused the same problems. In the end, we had to reinstall the driver software, use the WiFi mode and change USB ports.

The performance results below show that throughput was about average, but that doesn't tell the whole story. The HWU54DM would work for long periods of time, then suddenly drop the connection and become a nightmare to reconnect. When it worked, performance was fine, but the stability issues worry us. With that in mind, we can't recommend this wireless adaptor and suggest that you opt for the larger, but better, Hawking USB Wireless Dish Adapter, reviewed in *What's New, Shopper* April 2006.

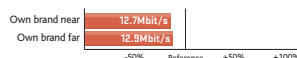
David Ludlow

SUMMARY

- ✓ Easy to see signal strength
- ✗ Variable performance
- ✗ Intermittently dropped the connection

802.11G WIRELESS ADAPTOR 54Mbit/s, USB
Hi-Speed interface PART CODE HWU54DM
SUPPLIER www.morecomputers.com
DETAILS www.hawkingeurope.com

PERFORMANCE (see page 60)



EDIMAX BR-6204Wg

★★★★★

£38 inc VAT



Sharing a broadband connection doesn't have to cost a fortune, as Edimax shows with its BR-6204Wg wireless router, which is available for under £40 including VAT.

The cheap price doesn't mean you miss out on any features, either. The router's smart casing houses a four-port Ethernet switch, a WAN port for connecting to an Ethernet modem and an 802.11g wireless access point.

Connecting to the router's management system was strangely familiar, as it uses the exact interface that Hawking uses for its wireless routers. This isn't a bad thing, as the interface is basic, but presents a clean, uncluttered view of the product's settings.

There's a quick-start wizard to help you get connected to the internet with minimum fuss. However, it covers only internet settings, so you need to configure your wireless settings independently, including security. The router supports WPA and WEP encryption and it's easy to turn on. We just wish the settings were part of the installation wizard.

The firewall is also turned off by default. We strongly recommend that it is turned on to offer protection against hackers. Finally, there's the standard range of port-forwarding options, which you'll need to configure only if you are having trouble getting some internet applications working.

As this is a standard 802.11g 54Mbit/s wireless router, there's no advantage in buying Edimax PC cards, as you won't see a massive increase in throughput. We tested using our Centrino notebook. Throughputs were slightly below our reference router, but nothing to worry about. Range was also respectable, with throughput barely dropping between our near and far tests.

However, if you want to share files or stream video or music, we recommend that you switch to a faster router, such as Buffalo's HighPower router (see 'Also consider...' left).

For those just wanting to share an internet connection, this no-frills option does the job. Its low price means that even those on a tight budget can get wireless.

David Ludlow

SUMMARY

- ✓ Cheap
- ✓ Easy to configure
- ✗ Security settings not part of installation wizard

802.11G WIRELESS ROUTER 54Mbit/s, four-port
Ethernet switch, one WAN port PART CODE BR-6204Wg
SUPPLIER www.scan.co.uk
DETAILS www.edimax.co.uk

PERFORMANCE (see page 60)

